

AVIROM, Leon Saadiyevich, kand. tekhn. nauk; BELYAYEV, B.I.,  
retsenzent; KOSTANDOV, A.I., red.izd-va; CHERKASSKAYA,  
F.T., tekhn. red.

[Tolerances in large-block house construction] Dopuski v  
krupnoelementnom zhilishchnom stroitel'stve. Leningrad, '  
Gosstroizdat, 1963. 162 p. (MIRA 17:1)

MUZAL'KOV, Mikhail Ivanovich; BELYAYEV, B.I., otv. red.; SLAVOROSOV,  
A.Kh., red.izd-va; IL'INSKAYA, G.M., tekh. red.

[Mine surveying operations in shaft sinking by means of work-  
ings which meet] Marksheidersko-geodezicheskie raboty pri  
prokhodke i uglubke shakhtnykh stvolov vstrechnymi zaboiami.  
Moskva, Gosgortekhzdat, 1963. 186 p. (MIRA 16(8))  
(Mine surveying) (Shaft sinking)

16.6200

S/044/62/000/005/045/072  
C111/C444

AUTHORS: Mazmishvili, A. I., Belyayev, B. I.

TITLE: The things in common of the weighing according to the group method at indirect and relative measurements

PERIODICAL: Referativnyy zhurnal, Matematika, no. 5, 1962, 41-42, abstract 5V201. ("Tr. Mosk. in-ta inzh. geod. aerofoto-syenki i kartogr.," 1961, vyp. 47, 3-26)

TEXT: One describes the theory of the group method at indirect and relative measurements. One considers the transformation process for four groups. Formulas for the corrections of the results of the immediate measurements at indirect and relative measurements are found. A combination of the formulas into four groups with respect to the corrections is given. The correctness of the theoretical considerations and of the obtained formulas is shown by the example of the weighing of a nivelling net in four variations: according to the method of indirect measurements (together and in two groups) and according to the method of relative measurements (together and in two groups). One points to the fact that all four variants show the same results. Bibliography with 12 titles. [Abstracter's note: Complete translation.]  
Card 1/1

JB

AUTHOR: Belyayev, B. I. S/044/62/000/003/066/092  
C111/C444

TITLE: The method of I. Yu. Pransis-Pranevich from the point of view of the block matrices

PERIODICAL: Referativnyy zhurnal, Matematika, no. 3, 1962, 45, abstract 3V229. ("Nauchn. tr. Mosk. gorn. in-t", 1961, no. 36, 111-114)

TEXT: An adjustment method with respect to groups is described, which is only partially independent since a connecting system does exist. First all the groups are transformed by a triangle transformation, then the connecting system is solved and in the inverted succession the partially independent variables are determined. It is shown, that from every equation group all partially independent variables, except for the connecting ones, can be eliminated successively.

[Abstracter's note: Complete translation.]

MAZMISHVILI, A.I., prof.; BELYAYEV, B.I., kand.tekhn.nauk, nauchnyy  
sotrudnik

Generalized Gaussian system for the solution of normal equations.  
Trudy MIIGAI no.42:3-18 '60. (MIRA 14:9)

1. Kafedra geodezii Moskovskogo instituta inzhenerov geodesii,  
aerofotos"yenki i kartografii (for Mazmishvili). 2. Kafedra  
marksheyderskogo dela Moskovskogo gornogo instituta imeni I.V.  
Stalina (for Belyayev).

(Matrice)

MAZMISHVILI, A.I., prof.; BELYAYEV, B.I., kand.tekhn.nauk, nauchnyy sotrudnik

Constructing the scheme of group adjustment in generalized Gauss  
algorithms. Trudy MIIGAIK no.41:15-18 '60. (MIRA 13:11)

1. Kafedra geodezii Moskovskogo instituta inzhenerov geodezii,  
aerofotos"yemki i kartografii (for Mazmishvili). 2. Kafedra mark-  
sheyderskogo dela Moskovskogo gornogo instituta imeni I.V.Stalina  
(for Belyayev).

(Triangulation)

(Algorism)

BELYAYEV, B.I.

PHASE I BOOK EXPLOITATION

80V/3760

Mazmishvili, Abram Ivanovich, and Boris Ivanovich Belyayev

Sposob naimen'shikh kvadratov (Method of Least Squares) [Riga] Geodezizdat, 1959. 370 p. Errata slip inserted. 6,500 copies printed.

Ed.: F.F. Pavlov; Ed. of Publishing House: A.I. Shurygina; Tech. Ed.: Yu.S. Shul'kina.

**PURPOSE:** This book is a textbook for students of surveying and geodesy at mining institutes, and can also be used as a manual by engineers in surveying and geodetic organizations who wish to become familiar with the problems of adjustment operations.

**COVERAGE:** The theory of the subject was written by Professor A.I. Mazmishvili, Doctor of Technical Sciences, and is based on material of lectures given by the author to students specializing in surveying at the Moscow Mining Institute imeni I.V. Stalin from 1952 to 1958. The book discusses problems of the theory of errors and the method of least squares in connection with the Legendre principle and in the light of orthogonal transformations of

Card 1/6

BELYAYEV, B.I., kand. tekhn. nauk

Analyzing the hydrogeology of Moscow Basin deposits using the  
method of mine geometry. Izv. vys. ucheb. zav.; gor. zhur. no.12:  
21-32 '58. (MIRA 12:8)

1. Moskovskiy gornyy institut.  
(Moscow Basin--Coal geology)  
(Mine water) (Prospecting)



SOV/104-10-1-1/22

Determining the Lack of Alignment in the Testing of Horizontal Displacement  
of Foundations of Water Power Structures

ments was recommended. This method can be applied to ranges with MIIGAIK-type marks and sighting signs. According to this method the measuring procedure comprises the consecutive determination of the deviation of every single mark (range point) from the range between two neighboring points. This method permits the determination of the deviation of the points from the range even if there are obstacles in the line from A to B. As sights are taken on shorter distances this method requires a shorter time of out-door observations than the method of moveable marks. The scope of calculations however is larger in this method. There are 4 figures and 1 reference, 1 of which is Soviet.

ASSOCIATION: Moskovskiy gornyy institut (Moscow Mining Institute)

Card 3/3

SOV/154-58-1-4/22

# Determining the Lack of Alignment in the Testing of Horizontal Displacement of Foundations of Water Power Structures

line consists of a series of fixed range points. The end points of the range line serve as bases and are included in the triangulation net. The range line is checked at regular intervals. The main task is to determine the displacements of range points in a direction normal to the range line. There are such ranges in the Tsymlyansk and Kaptshansk hydroelectric power systems. They were fitted with stations of special design. The stations were worked out in the NIISAN under the direction of M. S. Murav'yev. M. S. Murav'yev developed a method of range observation by means of moveable stations. This method was applied in the construction of the Tsymlyansk hydro-electric power station. The author suggests a system of range-observations according to two patterns: survey of half a range and survey of a quarter of a range. At the same time the shortcomings of this method are discussed. For the same purpose, Professor A. I. Durnev proposed the method of eyepiece micrometry. But this micrometer, too, has its shortcomings.

Therefore, in order to reduce the scope of out-door work and to simplify range observations, another method of range measure-

Card 2/3

BOV/154-50-1-4/22

AUTHORS: Gudkov, V. M., Candidate of Technical Sciences  
 Belyayev, B. I., Candidate of Technical Sciences

TITLE: Determining the Lack of Alignment in the Testing of Horizontal  
 Displacement of Foundations of Water Power Structures  
 (Opredeleniye otkloneniy toчек ot stвora pri izucheniі  
 gorizontal'nykh smeshcheniy osnovaniy gidrotekhnicheskikh  
 sooruzheniy)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Geodesiya i aerofotos'yemka, 1958, Nr 1. pp 35-40 (USSR)

ABSTRACT: In recent years a great number of water power structures  
 have been built on soft ground. One of the best methods for  
 testing the stability of the individual parts of the struc-  
 tures in the horizontal plane is the study of horizontal  
 displacement by means of range observations. The method of  
 such observations was suggested by the Moskovskiy institut  
 inzhenerov geodezii, aerofotos'yemki i kartografii (MIIGAK)  
 (Moscow Engineering Institute of Geodesy, Aerophotography  
 and Cartography). For stability test in the structures of  
 hydro-electric power stations a range line is used. This

Card 1/3

LYUBMAN, I.B., gornyy inzh.; BELYAYEV, B.I., kand.tekhn.nauk

Reverse order of mine orientation using a single plumb bob. Nauch.  
trudy MGI no.18:145-160 '57. (MIRA 11:9)  
(Mine surveying)

BELYAYEV, B. I.

BELYAYEV, B. I.: "A geometrical analysis of hydrogeological characteristics."  
Moscow, 1955. Min Higher Education USSR. Moscow Mining Inst imeni I. V.  
Stalin. (Dissertation for the Degree of Candidate of Technical Sciences)

SO: Knizhnaya Letopis' No. 47, 19 November 1955. Moscow.

BALDIN, V.A.; BELYAYEV, B.I.; SOKOLOVSKIY, P.I.; SHEYNFEL'D, N.M.;  
ARONE, R.G.

Steels of increased and high strength for structural elements.  
Prom. stroi. 41 no.1:17-21. Ja '64. (MIRA 17:6)

BELYAYEV, B.I.

More on the statistical method of designing construction  
elements. Prom. stroi. 43 no. 11:25-30 '65. (MIRA 18:12)

BELYAYEV, B.I.

International system of tolerances for structural elements. Prom.  
stro1. 42 no,11:23-25 N '64. (MIRA 18:8)



BELYAYEV, B.I.

Ensure a thorough investigation of the causes of building failures.  
Prom. stroi. 42 no.8:31-33 '65. (MIRA 18:9)

BELYAYEV, B.I.

Using carbon rimmed steel for structural elements. Prom.  
stroil. 41 no.5:35-37 My '64. (MIRA 18:11)

BELYAYEV, B.I., dotsent, kand. tekhn. nauk

New adjustment in groups by successively expanding corrections according to the absolute terms of conditional equations. Izv. vys. ucheb. zav.; geod. i aerof. no.5:19-22 '64. (MIRA 18:5)

1. Universitet druzhby narodov imeni Patrisa Lumumby. Rekomendovana kafedroy geodezii.

BELYAYEV, B.I.

Calculating the joints for high-strung bolts. Prom. stroi. 41 no.2:  
21-23 F '64. (MIRA 17:3)

BELYAYEV, B.I.

Optimum consolidation of structural elements in plants. Prom.  
stroil. 40 no.8:18-22 Ag '63. (MIRA 16:8)  
(Building materials)

BELYAYEV, B.I.

New regulations for the manufacture, assembly and inspection of  
steel elements. Prom. stroi. 40 [i.e. 41], no.5:32-37 My '63.  
(MIRA 16:5)

(Steel, Structural)

BELYAYEV, B.I.

Optimum capacity of structural elements plants. Prom. stroi. 40  
[i.e. 41] no.4:42-46 :Ap '63. (MIRA 16:3)  
(Building materials industry)

AYDAROV, G.A., inzh.; BELYAYEV, B.I., inzh.; LEVIN, L.I., inzh.;  
RYABOV, A.F., inzh.; SAKHNOVSKIY, M.M., kand. tekhn.  
nauk; CHESNOKOV, A.S.; SHILOVTSEV, D.P.; GAY, A.F., kand.  
tekhn.nauk, nauchn. red.; GORDEYEV, P.A., red.; GOL'BERG,  
T.M., tekhn. red.; RODIONOVA, V.M., tekhn. red.

[Manufacture of steel structures] Izgotovlenie stal'nykh  
konstruktsii. Moskva, Gosstroizdat, 1963. 401 p.  
(MIRA 16:8)

(Steel, Structural)



BELYAYEV, B.I.

Reliability of structural elements. Prom.stroi. 40 no.6:19-22  
'62. (MIRA 15:6)  
(Building materials--Testing)

BELYAYEV, B.I.

Let's use automatic welding more widely in the manufacture and  
assembly of structural elements. Prom.stroi. 39 no.8:62-64  
'61, (MIRA 14:9)  
(Welding--Congresses)

BELYAYEV, B.I.

Rigidity losses of steel elements under prestressing. From.  
stroi. 39 no.7:15-18 '61. (MIRA 14:7)  
(Concrete reinforcement)

BELYAYEV, B.I.; BALDIN, V.A.; SOKOLOVSKIY, P.I.

High-strength low-alloy steel for building elements. From.  
stroi. 39 no.5:26-29 '61. (MIRA 14:7)  
(Steel, Structural)

BELYAYEV, B.I.

Precision in preparing and assembling steel elements. Prom. stroi. 39  
no.4:41-46 '61. (MIRA 14:6)  
(Steel, Structural)

DELYAYEV, D.I.

Rated resistance of structural carbon steel. From. steel. 35  
no. 2:39-41 '61. (MMA 14:1)  
(Steel, Structural--Testing)

BELYAYEV, B.

Rewards for inventors in construction for the transportation  
industry. Avt. dor. 24 no.7:6 J1 '61. (MIRA 14:7)

1. Zamestitel' nachal'nika Tekhnicheskogo upravleniya  
Mintransstroya.  
(Rewards (Prizes, etc.)) (Transportation--Buildings and structures)

BELYAYEV, B.I.

Designing steel pipelines for strength. Stroi. truboprov. 6  
no.3:12-15 Mr '61. (MIRA 14:3)

1. Chlen-korrespondent Akademii stroitel'stva i arkhitektury SSSR.  
(Pipe, Steel) (Gas, Natural--Pipelines)



S/035/62/000/005/096/098  
A055/A101

AUTHOR: Belyayev, B. I.

TITLE: Method of I. Yu. Pranis-Pranevich in the light of block matrices

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 5, 1962, 40,  
abstract 5G227 ("Nauchn. tr. Mosk. gorn. in-t", 1961, no. 36,  
111 - 114)

TEXT: A matrix formulation of the method of Pranis-Pranevich is given. It is pointed out that group adjustment of indirect measurements can be effected, according to A. I. Mazmishvili, by the orthogonal transformation of the block matrix in the quasi-diagonal form. In that case, the division of the geodetic network into sections ceases to be obligatory, and the groups prove totally (and not partly) independent. It is asserted that the method of Pranis-Pranevich is a consequence of the Mazmishvili general theory of group adjustment. ✓

O. Sh.

[Abstracter's note: Complete translation]

Card 1/1

BELYAYEV, B.I.

The most efficient method for combining construction elements into  
assembly blocks. From. stroi. 38 no.10:36-41 '60. (MIRA 13:9)  
(Precast concrete construction)

NASONOV, V.N., BELIAYEV, B.I., BALDIN, V.A., TARANOVSKIY, S.V.,  
KHOKHARIN, A.Kh.

Possibilities of using aluminum and alluminum alloys in construc-  
tion. Prom. stroi. 38 no.8:36-39 '60. (MIRA 13:8)  
(Alluminum alloys) (Aluminum, Structural)

BELYAYEV, B.I.

Rated strength of the NL2(15XSND) rolled steel. Prom.stroi.  
38 no.1:35-36 '60. (MIRA 13:5)  
(Steel)

BELYAYEV, B.I.

Loss of local stability in shafts of steel television towers.  
Prom.stroi. 8 no.7:31-34 '60. (MIRA 13:7)  
(Strains and stresses) (Kurgan--Television--Antennas)

GUDKOV, V.M., dots.; BELYAYEV, B.I., kand.tekhn.nauk

Placing of mine plumbs during orientation through one vertical  
shaft with calculation of the effect of an air current. Izv.vys.  
ucheb.zav.; gor.zhur. no.2:57-60 '60. (MIRA 14:5)

1. Moskovskiy gornyy institut.  
(Mining engineering)

BELYAYEV, B.I.

Most efficient number of cranes and the time for carrying out the assemblage. Stroil. prom. 36 no.9:33-37 S '58.

(MIRA 11:10)

1. Deystvitel'nyy chlen Akademii stroitel'stva i arkhitektury SSSR.

(Cranes, derricks, etc.) (Precast concrete construction)

BELYAYEV, B.I.

BELYAYEV, B.I.

Safety of welded frames of industrial buildings constructed before  
the war. Stroi. prom. 36 no.1:44-45 Ja '58. (MIRA 11:1)  
(Precast concrete construction)



*BELYAYEV, B.I.*

**BELYAYEV, B.I.**

Using low-alloy steels for construction elements. Nov. tekhn. i  
pered. op. v stroi. 20 no.3:19-22 M '58. (MIRA 11:3)

1. Deystvitel'nyy chlen Akademii stroitel'stva i arkhitektury SSSR.  
(Steel alloys)

SOV/28-58-6-11/34

The Control of the Quality of Construction Steel

quality of production during a month, quarter, or year is determined. If the average quantity is above the desired value, the whole production may be used. If it is lower, changes must be made in the steel composition, the production process, etc. There is 1 graph.

Card 2/2

SOV/28-58-6-11/34

AUTHOR: Belyayev, B.I., Active Member of the USSR Academy  
of Architecture

TITLE: The Control of the Quality of Construction Steel  
(Kontrol' kachestva stroitel'noy stali)

PERIODICAL: Standartizatsiya, 1958, Nr 6, pp 45-47 (USSR)

ABSTRACT: The quality of construction steel is controlled  
by taking samples from current production. These  
are tested for resistance, yield, relative length-  
ening, etc. The state standards for the minimum  
reject limit are usually higher than the yield  
or resistance limits. For steel of type St. 3  
in the State Standard GOST 380-57, the minimum  
reject limit for yield in rolled material 40 mm  
thick is established at 24 kg/mm<sup>2</sup> whereas the  
yield limit is 21.6 kg/mm<sup>2</sup>. Great quantities of  
steel are rejected, therefore, which would be  
suitable for the purpose. A statistical method  
of control is recommended, in which the average

Card 1/2

YAKUBOVSKIY, F.B., red.; BELYAYEV, B.I., red.; VOLNYANSKIY, A.K., red.;  
KAMINSKIY, D.N., red.; KOL'TSOV, A.G., red.; KUREK, N.M., red.;  
OVSYANKIN, V.I., red.; PRIVALOV, N.M., red.; KHRAMUSHIN, A.M.,  
red.; ERISTOV, V.S., red.; UDOD, V.Ya., red.izd-va; TEMKINA,  
Ye.L., tekhn.red.

[Papers and reports of the section on industrial construction,  
assembling and specialized work of the All-Union Conference on  
Construction] Doklady i soobshchenia. Moskva, Gos.izd-vo lit-ry  
po stroit., arkhitekt. i stroit.materialam, 1958. 438 p.

(MIRA 12:7)

1. Vsesoyuznoye soveshchaniye po stroitel'stvu. Moscow, 1958.  
Sektziya promyshlennogo stroitel'stva, montazhnykh i spetsializirovannykh rabot.

(Building)

**BELEYEV, B.I.**

Dimensional tolerances for precast construction elements and details.  
Stroi. prom. 36 no.3:28-31 Mr '57. (MIRA 11:3)

1. Deystvitel'nyy chlen Akademii stroitel'stva i arkhitektury.  
(Tolerance (Engineering)--Tables, calculations, etc.)  
(Precast concrete construction)

**BELYAYEV, B.I.**

Statistical calculation method for reinforced concrete structural components. Stroi.prom. no.8:32-37 Ag '57. (MIRA 10:10)

1. Deystvitel'nyy chlen Akademii stroitel'stva i arkhitektury SSSR.  
(Structures, Theory of) (Reinforced concrete)

BELYAYEV, B.I., inzhener.

Stability loss in steel structures. Stroi.prom.34 no.12:25-31 D '56.  
(Strains and stresses) (MLRA 10:2)  
(Steel, Structural)

BELYAYEV, B.I., inzhener.

Using low-alloy steel for construction elements. Stroi.prom. 34  
no.4:24-27 Ap '56. (MLRA 9:8)

(Building, Iron and steel)



BELYAYEV, B.I., inzhener.

Scientific and technical conference on an improved assortment of  
rolled shapes. Stroi.prom. 34 no.1:46-48 Ja '56. (MLRA 9:5)  
(Moscow--Rolling (Metalwork)--Congresses)

SOV/137-57-10-19092

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 10, p 95 (USSR)

AUTHOR: Belyayev, B.I.

TITLE: Hot-rolled Section Inventory Needs for Structural Purposes  
(Trebovaniya k sortamentu goryachekatanykh profiley prokata  
dlya stroitel'nykh konstruktsiy)

PERIODICAL: V sb.: Ratsionalizatsiya profiley prokata. Moscow, Profiz-  
dat, 1956, pp 159-162

ABSTRACT: Note is taken of the need for improving the quality of beams,  
the inventory of which should be expanded by adding Nrs 65 and  
70. The symmetrical angle has become obsolete, and of 100  
sections in this category (under OST All-Union Standard 10014-  
39), 40 are superfluous. The 6th 5-Year Plan should provide  
for the construction of a wide-flanged I-beam rolling mill at  
the Novo-Lipetskiy Plant [ at Lipetsk; Transl. Ed. Note] .  
Critical remarks are presented on some of the papers heard at  
the conference.

Card 1/1

V.D.

BELYAYEV, B.I., inzhener, laureat Stalinskoy premii

On the yield point in large, thick, rolled sections of St.3 quality  
steel. Stroi.prom.33 no.8:32-34 Ag'55. (MLRA 8:11)  
(Steel, Structural)

BELYAYEV, B.I., inshener.

~~Statistical method of calculating normal stress in structural steel elements.~~  
Statistical method of calculating normal stress in structural steel elements. Stroi.prom. 32 no.3:32-37 Mr '54. (MLRA 7:5)  
(Steel, Structural) (Strains and stresses)

BELYAYEV, B.I., inzhener.

Approximation method of calculating bottoms of steel tanks.  
Stroi.prom.32 no.1:35-37 Ja '54. (MLRA 7:2)  
(Tanks)

**BELYAYEV, B.I.**

USSR/Engineering - Structural technology

Card : 1/1 Pub. 106 - 3/9

Authors : Belyaev, B. I. and Lashkov, A. D., Engineers

Title : Technological characteristics in preparing steel structures for the large culture and science building in Warsaw, Poland

Periodical : Stroi. prom. 7, 13 - 18, July 1953

Abstract : Technological data are presented on the manufacture and assembly of various steel structures for the culture and science building in Warsaw, Poland. Illustrations, drawings; diagrams.

Institution : ...

Submitted : ...

BELYAYEV, B.I.

Remarks on A.V.Beliaev's article "Effect of errors made in constructing and installing metal constructions upon the dimensions and shape of bridges, skyscrapers, and other structures." Izv.AN SSSR Otd.tekh.nauk no.4:602-606 Ap '53. (MIRA 6:8)

(Bridges, Iron and steel) (Building, Iron and steel)  
(Beliaev, A.V.)

BELYAYEV, E. I. and others

Spravochnik montazhnika stal'nykh konstruktsey.

Moscow, 1948.

6221.

A reference manual for steel construction workers, dealing with equipment, tools, and theoretical data (mathematics, physics, electro-techniques, strength calculations, etc.) necessary in steel construction; published by Government Edition of Construction Literature.



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| 1                                                                                                                                                                                                                                        | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11                             | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21                 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
| 1ST AND 2ND ORDERS                                                                                                                                                                                                                       |   |   |   |   |   |   |   |   |    | PROCESSES AND PROPERTIES INDEX |    |    |    |    |    |    |    |    |    | 3RD AND 4TH ORDERS |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| <p><i>Handwritten:</i> 12</p> <p><b>Hard cutting alloy.</b> B. I. Belyaev and I. S. Goev.<br/>             Russ. 32,158, Sept. 30, 1933. A mixt. of W carbides<br/>             with free C and a cementing metal or alloy is baked.</p> |   |   |   |   |   |   |   |   |    |                                |    |    |    |    |    |    |    |    |    |                    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
| <p>ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION</p> <p>1ST ORDER 2ND ORDER 3RD ORDER 4TH ORDER</p>                                                                                                                                    |   |   |   |   |   |   |   |   |    |                                |    |    |    |    |    |    |    |    |    |                    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |

L 17866-63  
 ACCESSION NR: AP3003697

products were separated radiochemically and investigated by means of an ionization chamber, a scintillation gamma-spectrometer and a  $4\pi$  gamma and Kx radiation detector. The yields are referred to the yield of the  $Al^{27}(p,3pn)Na^{24}$  reaction. Values of the cumulative or direct cross sections at five proton energies are tabulated for 46 isotopes of the different elements detected among the reaction products. The results should be a useful guide in selecting the irradiation conditions for maximizing the yield of specific isotopes. "The authors are grateful to members of the Laboratoriya yadernykh problem (Laboratory of Nuclear Problems), I. A. Yutlandov, V. N. Pokrovskiy and I. Yu. Levenberg, for support and assistance in the work, and to V. N. Mekhedov and V. N. Rybakov for their interest and collaboration in carrying out the irradiations on the proton synchrotron. Orig. art. has: 1 table.

ASSOCIATION: none

SUBMITTED: 00

DATE ACQ: 02Aug63

ENC: 00

SUB CODE: NS

NO REF SOV: 007

OTHER: 003

Card 2/2

L 17866-63  
ACCESSION NR: AP3003697

EWI(m)/BDS AFFTC/ASD

S/0048/63/0027/007/923/926

AUTHOR: Belyayev, B.T.; Kalyamin, A.V.; Murin, A.N.

TITLE: Excitation functions of nuclear reactions occurring incident to fast proton bombardment of Bi<sup>209</sup> /Report of the Thirteenth Annual Conference on Nuclear Spectroscopy held in Kiev from 25 January to 2 February 1963/

SOURCE: ZN SSSR, Izv.Seriya fizicheskaya, v.27, no.7, 1963, 923-926

TOPIC TAGS: spallation, proton induced reaction, isotope production cross section, Bi<sup>209</sup>

ABSTRACT: The present work was a continuation of earlier studies (B.I.Belyayev, A.V.Kalyamin and A.N.Murin, Doklady AN SSSR, 140, 837, 1961 and A.V.Kalyamin, A.N. Murin and B.K.Preobrazhenskiy, Izv.AN SSSR,Ser.fiz.,26, 245, 1962) of the yields of spallation of bismuth-209. The present paper gives new and refined data on the cross sections for the formation of the nuclides resulting from bombardment of a bismuth oxide or metallic Bi<sup>209</sup> with protons having energies from 0.135 to 10 GeV. In all 48 irradiations lasting from 15 min to 4 hours were performed on the synchrocyclotron and proton synchrotron of the Ob'yedinennyy institut yadernykh issledovaniy--OIIyI (Joint Institute for Nuclear Research). The

Card 1/2

MAZMISHVILI, A.I., prof., doktor tekhn.nauk; BELYAYEV, B.I., dotsent,  
kand.tekhn.nauk

Consistency of balancing by the group method in indirect  
and conditional measurements. Trudy MIIGAIK no.47:3-26 '61.  
(MIRA 15:7)

1. Kafedra geodezii Moskovskogo instituta inzhenernoy  
geodezii, aerofotos"yemki i kartografii.  
(Groups, Theory of)  
(Geodesy)

MAZMISHVILI, A.I., doktor tekhn.nauk, prof.; BELYAYEV, B.I., kand.tekhn.  
nauk, dotsent, nauchnyy sotrudnik

Joint adjustment and accuracy evaluation using the method of  
groups in indirect and conditional measuring. Trudy MIIGAIK  
no.48:3-78 '61. (MIRA 15:8)

1. Kafedra geodezii Moskovskogo instituta inzhenerov geodezii,  
aerofotos"yemki i kartografii (for Mazmishvili). 2. Kafedra  
marksheyderskogo dela Moskovskogo gornogo instituta (for Belyayev).  
(Leveling)

S/035/62/000/007/077/083  
A001/A101/

AUTHORS: Mazmishvili, A. I., Belyayev, B. I.

TITLE: Adjustment and evaluation of accuracy by the method of groups in indirect and conditional measurements

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 7, 1962  
27. abstract 7G200 ("Tr. Mosk. in-ta inzh. geod., aerofotos"yemki i kartogr.", 1961, no. 48, 3 - 78)

TEXT: See for the beginning RZhAstr, 1962, 5G220. The authors consider the evaluation of accuracy of adjustment results by means of block orthogonalization of initial equations. Advantages of this method are noted: Rigorosity. iteration (in the form of calculation organization), finite number of necessary operations, common features (known procedures of group adjustment are special cases of block orthogonalization), etc. There is given a summary of formulae for adjustment of measurements and evaluation of accuracy. An example is presented (various variants of adjusting a second-class leveling network with 21 units). There are 10 references.

N. Drozdov

[Abstracter's note: Complete translation]

Card 1/1

Contribution to the ...

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D034/D113

p. 69) it is found that they coincide with an approximation of 0.1". The principle of constructing a system by adjustment based on the method of four and more groups remains identical. Reference is made to the work of I.Yu. Pranis-Pranevich in connection with the problem of three-group adjustment. There are 2 tables and 4 Soviet references. [Abstracter's note: Essentially complete translation].

ASSOCIATION: Kafedra geodezii Moskovskogo instituta inzhenerov geodezii, aerofotos"yemki i kartografii (Department of Geodesy of the Moscow Institute of Engineers of Geodesy, Aerial Photography and Cartography) (Mazmishvili, A.I.); Kafedra marksheyderskogo dela Moskovskogo gornogo instituta im. I.V. Stalina (Department of Mine Surveying of the Moscow Mining Institute im. I.V. Stalin) (Belyayev, B.I.).

Card 7/8

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DC34/D113

Contribution to the ...

$$\left. \begin{aligned} V'' &= B_0 * K_1'' + C_0 * K_2'' \\ V''' &= C_{00} * K''' \end{aligned} \right\} \quad (11)$$

The final corrections

$$V = V' + V'' + V''' \quad (12)$$

are written in column 14. The second and third corrections are calculated using the equations

$$\left. \begin{aligned} [V''^2] &= -\sum K'' [W_2 * 1] \\ [V'''^2] &= -K''' [W_3 * 2] \end{aligned} \right\} \quad (13)$$

Comparing the second and third corrections with the data previously obtained by A.I. Kobylin (Ref. 1: Gruppovoye uravnoveshivaniye rudnichney triangulyatsii [Group adjustment of mining triangulation]. Metallurgizdat, 1955,

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DC34/D113

Contribution to the ...

$$[BB^*] + [CB^*1] + [W_2^*1] = [S_2^*1] \quad (7)$$

$$[CC^*2] + [W_2^*2] = [S_3^*2] \quad (8)$$

The transformed coefficients of the conditional equations of the second (10) and third (11) groups are calculated according to the following formulas:

$$\left. \begin{aligned} B_o^* &= B^* + A^* \rho_{AB} \\ C_o^* &= C^* + A^* \rho_{AO} \end{aligned} \right\}, \quad (9)$$

$$C_{oo}^* = C_o^* + B^* \rho_{BC} \quad (10)$$

Numbers 11 and 13 show columns containing the second and third corrections which may be determined according to the formulas:

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Contribution to the ...

order of the  $Q_{AA}$ ,  $\rho_{AB}$  and  $\rho_{AC}$  group of matrices in the system is designated by the number 4, number 5 standing for the block matrices of the transformed coefficients of the second group; they may be found according to the following law: each element of the matrix of the transformed coefficients is equal to the corresponding element of the original matrix minus the algebraic sum of the products of each element of the row by each element of the column of matrices included in the transformation formula as subtrahends. The solution to the transformed normal equations of the correlates of the second group is shown in system 6, in which the correlates of the second group and the elements of the inverse matrix  $[Q_{BB}^{-1}]$ , essential for finding the operator (6), are calculated simultaneously. The inverse matrix  $[Q_{BB}^{-1}]$  and the operator  $\rho_{BC}$  are shown in system 7. Using formulae (4), the elements of the block matrix of the transformed coefficients of the normal equations of the correlates of the third group are similarly determined. A solution to these equations is given in system 9. The transformation of the coefficients of the normal equations of the correlates is controlled according to the formulas:

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Contribution to the ...

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DC34/1113

$$\left. \begin{aligned} p_{AB} &= -Q_{AA}^{AB*} \\ p_{AC} &= -Q_{AA}^{AC*} \end{aligned} \right\}, \quad (5)$$

$$p_{BC} = -[Q_{BB}^{-1}] [BC*1]. \quad (6)$$

Using the elements (1) and (2) and the rule for developing a generalized Gaussian algorithm, the three-group adjustment process can be represented according to the system shown in table 1, in which the actual transposed matrices of the coefficients of the conditional equations are shown (numbers 1 and 2). By multiplication of these two matrices, a block matrix (number 3) of the coefficients of the normal equations of the correlates is obtained. The elements of the block matrices, nos. 5 and 6, may be determined according to formulas 3 and 4. The conditional equations of the figures are usually included in the first group. Therefore, the elements of the inverse matrix  $Q_{AA}$  (number 5) are numerically equal, along the main diagonal, to the quotients of dividing the unit by the corresponding square coefficients of the  $AA^*$  matrix, all the other elements being equal to zero. The

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Contribution to the ...

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DC34/D113

By triangular transformation, the matrix (1) assumes the form:

$$\begin{pmatrix} AA^* & AB^* & AC^* & W_1 & S_1 \\ & [BB^*1] & [BC^*1] & [W_21] & [S_21] \\ & & [CC^*2] & [W_32] & [S_32] \end{pmatrix}, \quad (2)$$

where

$$\left. \begin{aligned} [BB^*1] &= BB^* + BA^* \rho_{AB} \\ [BC^*1] &= BC^* + BA^* \rho_{AC} \\ [W_2^*1] &= W_2^* + W_1^* \rho_{AB} \\ [S_2^*1] &= S_2^* + S_1^* \rho_{AB} \end{aligned} \right\}, \quad (3)$$

$$\left. \begin{aligned} [CC^*2] &= CC^* + CA^* \rho_{AC} + [CB^*1] \rho_{BC} = [CC^*1] + [CB^*1] \rho_{BC} \\ [W_3^*2] &= W_3^* + W_1^* \rho_{AC} + [W_2^*1] \rho_{BC} = [W_3^*1] + [W_2^*1] \rho_{BC} \\ [S_3^*2] &= S_3^* + S_1^* \rho_{AC} + [S_2^*1] \rho_{BC} = [S_3^*1] + [S_2^*1] \rho_{BC} \end{aligned} \right\}, \quad (4)$$

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DC34/D113

16.6500

AUTHORS: Mazmishvili, A.I., Professor and Belyayev, B.I., Candidate of Technical Sciences, Scientific Co-Worker of the Department of Mine Surveying (See Association)

TITLE: Contribution to the problem of constructing a system of group adjustment in generalized Gaussian algorithms

SOURCE: Moscow. Institut inzhenerov geodezii, aerofotos"yemki i kartografii. Trudy, no. 41, 1960, 15-17

TEXT: Considering the theorems put forward in a previous article by A.I. Mazmishvili (Ref. 2: Izvestiya VUZ'ov. Geodeziya i aerofotos"yemka No 3, 1959), the following expanded block matrix is developed using conditional measurements:

$$\left\| \begin{array}{cccc} AA^* & AB^* & AC^* & W_1 S_1 \\ BA^* & BB^* & BC^* & W_2 S_2 \\ CA^* & CB^* & CC^* & W_3 S_3 \end{array} \right\| . \quad (1)$$

Card 1/87

BELYAYEV, B.I., inzh.

Destruction of two air preheaters of a blast furnace during testing. Prom.stroi. 38 no.3:39-44 '60. (MIRA 13:6)  
(Air preheaters) (Blast furnaces)

SVYATOSLAVOV, Nikolay Ivanovich, kand.tekhn.nauk; BELYAYEV, Boris  
Alekseyevich; KOKORIN, V.V., retsenezent; KRYUKOV, V.M.,  
spetsred.; ORLOVA, L.A., red.; KNAKNIN, M.T., tekhn.red.

[Cotton opening and picking equipment] Razrykhritel'no-  
trepal'nyi agregat dlia khlopka. Moskva, Gos.nauchno-tekhn.  
izd-vo lit-ry po legkoi promyshl., 1959. 130 p. (MIRA 13:3)

1. Glavnyy konstruktor zavoda Kuztekstil'mash (for Belyayev).  
(Cotton machinery)

BELYAYEV, B.A. (g.Bal'tiyak)

Defective eye sight caused by congenital anomaly in the development  
of the eye. Vest.oft. 69 no.5:93 S-0 '56. (MLRA 9:12)  
(EYE--DISEASES AND DEFECTS)



BELYAYEV, B., inzh.

Using diluted bitumens in curing concrete. Avt.dor. 24 no.2:11-12  
F ' 61.

(Concrete-Curing) (Bitumen)

CA

BELYAYEV, A. Ye.

24

The manner in which the rate of combustion of priming explosives depends upon the pressure. A. F. Belyayeva and A. K. Belyaev. *Doklady Akad. Nauk S.S.S.R.* 36, 491-4 (1947); *Chem. Zentr.* (Russian Zone Ed.) 1948, II, 555-6; cf. *C.A.* 41, 4310k; 43, 1982b. —Mercuric fulminate, trinitrotriazidobenzene, and tricyclonacetone peroxide (I) were used for the expts. reported. They were compressed to cylinders (3-4 by 5-7 mm.) under 200 atm. These were placed under a bell jar sufficiently large so that the pressure would be changed only slightly after combustion. A hot wire was used to start combustion. The rate of reaction was recorded photographically by using moving film. The relation between the rate of combustion and the pressure was shown to be linear ( $u = A + bp$ ), as had already been found by Andreev (cf. *C.A.* 35, 6457) for secondary explosives. The data obtained for I did not show a completely linear relationship.  $A = 0$  for I. Of the various explanations which have been offered to explain this linear relationship, the most satisfactory seems to be that the rate of combustion depends upon the reaction in the gas phase, where the rate would naturally be proportional to the pressure. M. G. Moore

ACCESSION NR: AR4041523

source over method of usual calculation. Under assumptions that hysteresis loop ideally is rectangular, active resistance of operation coils is equal to zero, diodes are ideal, and so forth, it is shown that magnetic amplifier has maximum efficiency of 50% during equality of load and ballast resistors. Results are given of experiment for magnetic amplifier with cores OL 20/25-5 at a frequency of 400 cps and a supply voltage of 23 v. Six illustrations. Bibliography: 5 references.

SUB CODE: EC

ENCL: 00

Card 2/2

ACCESSION NR: AR4041523

S/0271/64/000/005/A008/A008

SOURCE: Ref. zh. Avtomatika, telemekhanika i vy'chislitel'naya tekhnika. Svodny'y tom, Abs. 5A52

AUTHOR: Belyayev, A. Ya.; Lipman, R. A.; Negnevitskiy, I. B.

TITLE: Presentation of magnetic amplifier in the form of equivalent controlled oscillator for purposes of analysis and calculation

CITED SOURCE: Sb. dokl. Tashkentsk. politekhn. in-t, no. 3, 1963, 20-39

TOPIC TAGS: magnetic amplifier, controlled oscillator

TRANSLATION: The magnetic amplifier is considered as a controlled source of current or voltage. The output of the magnetic amplifier within certain limits depends only on the input signal and not on resistance of load, frequency, and supply voltage. On this basis there is analyzed operation of magnetic amplifier of bridge type with self-saturation having output of direct current and one ballast resistor (magnetic amplifier with increased efficiency). There are shown advantages of calculation of characteristics of magnetic amplifier in the form of controlled

Card 1/2

BELYAYEV, A.Ya.

Effect of the amniotic membrane tissue preparation on the restoration of hearing in otitis. Vest. otorinolar., Moskva 13 no.6:14-17 Nov-Dec 1951. (GLML 21:2)

1. Of the Clinic for Diseases of the Ear, Throat, and Nose (Director -- Prof. I. V. Korsakov), Turkmen Medical Institute, Ashkhabad.

BELYAYEV, A.Ya.

Tissue therapy of suppurative otitis with a preparation of fetal membranes. Vest.otorinolar. 13 no.1:26-31 Jan-Feb 51.(GLML 20:5)

1. Major, Medical Corps. 2. Of the Clinic for Diseases of the Ear, Throat, and Nose (Director--Prof.I.V.Korsakov), Turkmen State Medical Institute.

BELYAYEV, A.V.; GRIGORIADI, M.G.; SOLOV'YEV, N.S.; PAVLIN, A.V.

Advanced technology for drying and finishing Russian leather.  
Kozh.-obuv.prom. 2 no.8:20-22 Ag '60. (MIRA 13:9)  
(Leather)

BELYAYEV, A.V.

MORIKHODOV, G.A.; SHUSTOROVICH, M.L. [deceased]; BELYAYEV, A.V.;  
GRIGOR'YADI, M.G.; KOMKOVA, A.Y.

Adequate thickness of Russian leather. Kozh.-obuv.prom. 2  
no.2:21-23 F '60. (MIRA 13:5)  
(Leather)



BELYAYEV, A.V.

BELYAYEV, A.V., inzh.; FAMINSKIY, A.P., inzh.

New thread reinforcement for the manufacture of shoes. Log. prom. 16  
no.8:24-27 Ag '56. (MIRA 10:12)  
(Shoe industry--Equipment and supplies)

BELYAYEV, A.V., inzhener

For further technical progress in the footwear industry. Leg.  
prom. 16 no.4:4-8 Ap '56. (MLRA 9:8)  
(Shoe industry)

BELYAYEV, A.V., inzhener

We should improve technology for the production of patent  
leather footwear. Leg. prom 15 no.4:12-17 Ap '55.  
(Shoe industry) (MIRA 8:7)

BELYAYEV, A.V.

Urgent problems of the development of the shoe industry. Leg.  
prom. 14 no.8:4-13 Ag '54. (MLRA 7:8)

1. Nachal'nik otdela obuvnoy promyshlennosti Tekhnicheskogo  
upravleniya. (Shoe industry)

BELYAYEV, A.V.; PTITSYN, B.V. [deceased]

Effect of bivalent mercury on  $K_2RhCl_6$  aquation reaction,  
Zhur.ob.khim. 35 no.12:2124-2127 D '65.

(MIRA 19:1)

1. Institut neorganicheskoy khimii Sibirskogo otdeleniya AN  
SSSR. Submitted November 10, 1964.

BELYAYEV, Aleksandr Vasil'yevich; TOLSTOY, Mikhail Georgiyevich;  
GANDZHUNTSEV, I.M., nauchn. red.; STRATILATOVA, K.I.,  
red.; DORODNOVA, L.A., tekhn.red.

[Assembling prefabricated elements] Montazh sbornnykh kon-  
struktsii. Izd.2., perer. i dop. Moskva, Proftekhizdat,  
1963. 315 p. (MIRA 17:3)

BELYAYEV, A.V.; GRIGORIADI, M.G.; DORONINA, N.N.

New developments in the finishing technology of hide chrome  
leather for shoe uppers in the Moscow Leather Combine. Kozh.-  
obuv.prom. 4 no.12:31-32 D '62. (MIRA 16:1)  
(Moscow-Leather industry)

BELYAYEV, Aleksandr Vasil'yevich; TOLSTOY, Mikhail Georgiyevich;  
MASLENNIKOV, G.P., nauchnyy red.; STRATILATOVA, K.I.,  
red.; NESMYSLOVA, L.M., tekhn. red.

[New prefabricated elements in construction] Novye sbornye  
konstruktsii v stroitel'stve. Moskva, Proftekhizdat, 1962.  
88 p. (MIRA 15:10)

(Building materials)  
(Building--Technological innovations)



BELIAYEV, Aleksandr Vasil'yevich, doktor tekhn.nauk; TOLSTOY, Mikhail  
Georgiyevich, dotsent; BILINSKIY, M.Ya., red.; SUSHKEVICH,  
V.I., tekhn.red.

[Assembling precast reinforced concrete elements] Montazh  
sbornykh zhelezobetonnykh konstruksii. Moskva, Vses.uchebno-  
pedagog.izd-vo Trudrezervizdat, 1959. 298 p. (MIRA 13:5)  
(Precast concrete construction)

BELYAYEV, A.V., professor, doktor tekhnicheskikh nauk; GAY, A.F.,  
kandidat tekhnicheskikh nauk.

Assortment of reinforced concrete and concrete rectangular prefabricated  
products manufactured in accordance with the system of preferred numbers.  
Standartizatsiia no.6:2--23 N-D '56. (MIRA 10:1)  
(Precast concrete--Standards)

BELYAYEV, A.V.

Answering B.I. Beliaev's remarks. Izv. AN SSSR Otd. tekhn. nauk no. 4:607-610  
Ap '53. (MLRA 6:8)  
(Building, Iron and steel)

BELENKOV, A.V.

Effect of errors upon the dimensions and form of bridges, viaducts and other structures made in constructing and installing civil engineering.  
Izv. AN SSSR Otd. tekhn. nauk, no. 3, 1957

BELZANET, A. V.

"Investigation of Geometrical Errors in Metallic Structures." Sep 15-Nov 11, Inst  
of Mechanics, Acad Sci USSR.

Dissertation presented for science and engineering degree in Moscow, U.S.S.R.

SO: Sum. No. 416, 2 May 65.

BELIAEV, Aleksandr Vasil'evich

The bridges across the Moscow river. Moskva, Izd-vo Akademii nauk SSSR, 1945. 129 p.  
(49-56760)

TG86.M6B4

MI NNC WaU

BEIYAYEV, A.V.; KAZAEV, V.P.; PITTSYN, B.V.

Certain features of the behavior of complex compounds of  $\text{Co}^{2+}$  in solution as linked with the compensation effect. Dokl. AN SSSR 160 no.1:149-150 Ja 1965. (MIRA 18:2)

1. Institut neorganicheskoy khimii Sibirskogo otdeleniya AN SSSR.
2. Chlen-korrespondent AN SSSR (for Pittsyn).

BELYAYEV, A.V.

The MR-105 automatic hydraulic copying lathe for machining  
drills and taps. Biul.tekh.-ekon.inform. no.7:17-19  
'60. (MIRA 13:7)  
(Lathes--Numerical control)



68102

Determination of the Pressure of Saturated Vapor of Solid Tellurides of Zinc and Cadmium SOV/78-5-1-1/45

CdTe within the range 450 - 660°; the method of determination described in reference 9 was used. The results are shown in tables 4,5 and figure 1. The simultaneous determination by the effusion method yielded corresponding results. The opening of the effusion chamber was calibrated with KCl (Table 3). The following computations were made:  $\Delta H$  of ZnTe = 48.65 kcal/mol,  $\Delta H$  of CdTe = 43.46 kcal/mol, assuming that the sublimation heat  $\Delta H$  does not depend on temperature in the temperature range investigated. The resultant values of the pressure of the saturated vapor of these tellurides speak in favor of the possibility of purifying these compounds by sublimation and of using them in semiconductor technique. There are 1 figure, 5 tables, and 13 references, 9 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet (Moscow State University)

SUBMITTED: October 6, 1958

Card 2/2

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5.4210(A)  
~~5(2), 5(4)~~

68102  
SOV/78-5-1-1/45

## AUTHORS:

Korneyeva, I. V., Belyayev, A. V., Novoselova, A. V.

## TITLE:

Determination of the Pressure of Saturated Vapor of Solid  
Tellurides of Zinc and Cadmium

## PERIODICAL:

Zhurnal neorganicheskoy khimii, 1960, Vol 5, Nr 1, pp 3 - 7  
(USSR)

## ABSTRACT:

The authors point out that publications give no data on the pressure of saturated vapor of ZnTe and CdTe. In the experimental part they report on the preparation of the two compounds from zinc of the type TsO (GOST 3640-47), cadmium of the type KgO (GOST 1467-42), and pure tellurium which had been obtained according to references 4,5. The components were fused in stoichiometric ratio in evacuated quartz ampoules. The vigorous reaction of Zn with Te is referred to. Tables 1,2 show the analysis data of the two tellurides. The lines of the radiographs (taken by Yu. P. Simanov) agreed with the data of publications and showed no lines of the free components. The investigation of the compounds sublimed at 700° showed that their composition is not changed by sublimation. The vapor pressure of ZnTe was determined within the temperature range 520 - 720°, that of

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AUTHORS: Belyayev, A.V., Shnurov, Z.Ye.

TITLE: Some Results of Fatigue Tests<sup>26</sup> of Constructions of Aluminum Alloys<sup>27</sup>

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TEXT: The authors describe the results of fatigue tests of profiles made of aluminum alloys carried out in the Laboratory of Construction Tests of the Moscow University in the years 1957-1958. There were investigated perforated profiles (such as airfoil wings) under bending with variable sign (vibration<sup>28</sup> test) and under simultaneous static stretching. In order to reduce the duration of investigations, an approximation method possessing several systematic errors was applied, such that the results are essentially only qualitative. A diminution of the fatigue strength was stated under increasing profile height, and large influence of the static stress on the fatigue limit. There are 3 references : 2 Soviet and 1 American.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova  
(Moscow State University imeni M.V. Lomonosov)

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